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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/631,100	07/31/2003	Dale L. Partin	DP-309294	7754

22851 7590 01/18/2007  
DELPHI TECHNOLOGIES, INC.  
M/C 480-410-202  
PO BOX 5052  
TROY, MI 48007

EXAMINER
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NASSER, ROBERT L

ART UNIT	PAPER NUMBER
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3735

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	01/18/2007	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

## Office Action Summary

Application No.

10/631,100

Applicant(s)

PARTIN ET AL.

Examiner

Robert L. Nasser.

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 25 October 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-17, 22 and 34 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-17, 22, 34 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-3, 8-14, 16, 17, and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Breed et al 6736231 in view of Breed et al 6253134 and Sullivan et al 6984207. Breed '231 shows a vehicle system monitoring method that includes a weight sensor to measure weight of a user in a vehicle, and measures both the heart rate and breathing rate of a user to monitor the users health. Following a crash, it uses the weight and health indicators to indicate the condition of a user. It does not have a fluid filled bladder to measure the weight. Breed 134 teaches using a fluid filled bladder to measure weight to provide a indication of both the motion and size of the occupant. As such, it would have been obvious to modify Breed'231 to use such a bladder, as it is merely the substitution of one known weight sensor for another. Breed '231 further teaches that in such a car monitoring system the health sensor may be integrated into the motion (weight) sensor (see column 15, lines 58+). Sullivan et al further teaches that it is well known to measure heartbeat with a fluid filled bladder. Hence, it would have been obvious to modify the combination above to use the bladder to measure both weight (i.e. presence of a person) and heartbeat data, as it is merely the use of a well-known device for the purpose. As to Claims 2-3, Sullivan teaches that it is known to filter a heartbeat signal using a bandpass filter with a range of 0.1-40 hz . Hence, it would have been obvious to use such a filter with the sensor in the combination, to

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eliminate sources of error. As to claim 8, Breed '231 further teaches that respiration maybe used as the health indicator. Sullivan et al further teaches that it is well known to measure respiration rate and amplitude. Hence, it would have been obvious to modify the combination above to use the bladder to measure both weight (i.e. presence of a person) and heartbeat data, as it is merely the use of a well-known device for the purpose. As to claim 10, Sullivan measures the amplitude or respiration signal, which is an indication of volume and is used as a health indication. As to claim 11 and 16, since the signal is monitored of a period of time, the variation is determined. Claim 12 is rejected in that Sullivan teaches that the amplitude of the breathing signal is an important health indicator. As such, it would have been obvious for one with ordinary skill in the art at the time of the invention to modify the combination above to determine variability of the isolated perturbation to determine of heart rate variability, to provide a more complete picture of the patient's condition. As to claim 13, it is the examiner's position that it is well known to allow the user to configure settings in a car to each users comfort level. Hence, it would have been obvious to modify the combination to allow adjustment, to increase user comfort. Claim 14 is rejected in that there are multiple chambers (bladders). As to claim 15, Sullivan teaches measuring nearby human noise and activity signals, noise and vibration from the machinery, and electromagnetic (EM) noise emitted from the lights and instrumentation and compensating therefore. Thence it would have been obvious to modify the combination to reduce noise, to increase the accuracy of measurement. Claim 17 is rejected in that heart rate is used as a health

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indicator. As to claim 22, Breed '231 teaches transmitting the health condition to a remote facility to enable emergency help to be sent.

Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Breed et al in '231, Breed et al '134 and Sullivan, as applied to claims 1-3, 6-14, 16, 17 and 22 above, further in view of Bakken et al 2004/0260348. Bakken teaches that heart rate variability is a known indicator of the health of a user. As such, it would have been obvious for one with ordinary skill in the art at the time of the invention to modify the combination above to determine variability of the heart rate to determine of heart rate variability, to provide a more complete picture of the patient's condition.

Claims 5-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Breed et al in '231, Breed et al '134 and Sullivan, as applied to claims 1-3, 6-14, 16, 17 and 22 above, further in view of Gallant et al, US 2003/0149369. The above combination does not teach measuring an amplitude of a said perturbation as an indication of differential blood pressure. It is well known that pulse pressure is defined as a difference between systolic and diastolic pressures measurements. Gallant teaches that pulse pressure is a known indicator of health. Hence, it have been obvious with one with ordinary skill in the art at the time of the invention to modify the above combination to use such a health indicator, to provide a more complete picture of a patient's condition. As to claim 6, since the signal is monitored of a period of time, the variation is determined.

Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Breed et al in '231, Breed et al '134 and Sullivan, as applied to claims 1-3, 6-14, 16, 17 and 22

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above, further in view of Greenhut 6454719. Greenhut teaches that respiration rate variability is a known indicator of the health of a user. As such, it would have been obvious for one with ordinary skill in the art at the time of the invention to modify the combination above to determine variability of the respiration rate to determine of heart rate variability, to provide a more complete picture of the patient's condition.

Claims 34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Breed et al in '231, Breed et al '134 and Sullivan, as applied to claims 1-3, 6-14, 16, 17 and 22 above, further in view of Gorenberg et al 2004/0044288. The above combination does not teach the local normalization process recited in the claim. Gorenberg teaches such a process as a health indicator in paragraphs 109 and 160. Hence, it have been obvious with one with ordinary skill in the art at the time of the invention to modify the above combination to use such a health indicator, to provide a more complete picture of a patient's condition.

Applicant's arguments filed 10/25/2006 have been fully considered but they are moot in view of the new grounds of rejection.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not

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mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Robert L. Nasser whose telephone number is 571 272-4731. The examiner can normally be reached on m-f 9-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Charles Marmor II can be reached on 571 272-4730. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Robert L. Nasser  
Primary Examiner  
Art Unit 3735

RLN  
January 7, 2007



ROBERT L. NASSER  
PRIMARY EXAMINER